UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL

Distr.: GENERAL

E/ECA/CM.17/10
7 March 1991

Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA

Twelfth meeting of the Technical Preparatory Committee of the Whole

Addis Ababa, Ethiopia
29 April - 7 May 1991

ECONOMIC COMMISSION FOR AFRICA

Twenty sixth session of the Commission/ seventeenth meeting of the Conference of Ministers

Addis-Ababa, Ethiopia
9-13 May 1991

IMPLICATIONS OF THE APPARENT IMPACT OF STRUCTURAL ADJUSTMENT PROGRAMMES (SAPs) ON POPULATION

E91-336

INTRODUCTION

1. As a consequence of several factors, the last three decades have witnessed a deterioration of socio-economic conditions in many African countries. Among the internal factors are: (a) the persistent differentials in incomes between rural and urban areas as well as the relative neglect of the former; (b) the establishment of a few large-scale manufacturing industries and widespread application of import substitution strategy based on capital technologies that do not address problems of employment and labour absorption; (c) delayed demographic transition; and (d) unstable political structures. On the other hand, the exogenous factors include: (a) the hostile external economic environment; (b) persistent decline in world prices of primary commodities (eg. fluctuations in cost of oil and other manufactured goods; (c) servicing of heavy debts; and, (d) frequent droughts (Adedeji, 1990).

2. Concommitantly, rapid population growth rates became a phenomenon of developing countries since world war II, as a result of rapid declines in mortality and a lag in fertility declines. Despite policies aimed at controlling population growth rates, these remained high in Africa and resulted in using more and more resources to provide basic growing needs of the population instead of investing them in the productive sector and in the provision of development related infrastructure. Accordingly, in the 1980s, development strategies laid greater emphasis on people's participation in the development process simultaneous with mobilization of community resources and self-reliance to provide for the basic needs at the community level. Essentially, an integrated approach to population and development planning has been much popularized since the dawn of the 1980s. It is suggested that by 'endogenizing' population factors in the development planning process, sustainable development can be achieved.

3. In the 1980s economic policy in developing countries was largely dominated by the need to adjust to serious balance of payments problems. Traditional project lending for balance of payments support was then the preserve of the International Monetary Fund (IMF). Lending in support of a programme to cope with a balance of payments crisis was launched by the World Bank in 1980. Initially these structural adjustment programmes (SAPs), expected to be short lived, were limited to the task of achieving macro-economic balances; they involved the adoption of policies to enhance economic efficiency, promote growth and ensure that resources are allocated according to the free play of market forces. The earlier SAPs were thus committed to achieving stabilization and growth objectives, and tended to concentrate on the economic dimension of development thereby marginalizing the social and human dimensions in development (UNECA, 1988; UNICEF, 1990a).

4. By 1984, 30 developing countries with external payments difficulties had received adjustment loans from the World Bank. Of these six (Cote D'Ivoire, 1981; Kenya, 1980; Malawi, 1981; Mauritius, 1981; Senegal, 1980; and Togo, 1983) were in Africa. As at 1987, 12 other African countries had received similar loans (See Table 1). As the experience with this type of lending accumulated during the 1980s and the complexities of the adjustment process became apparent in a large number of country experiences, SAPs came to encompass a far broader range of policy areas than balance of payments and price stability. The additional concerns had to do with the time frame, sustainability and long term growth and development; these were incorporated into the discussions and negotiations over the design of country-specific adjustment programmes. The critical element was how much room for manoeuver governments had in maintaining their fiscal deficits (United Nations, 1991).

5. Orthodox SAPs assumed that "the classical instruments of control namely money supply, credit squeeze, exchange rate and interest rate adjustments, trade liberalization (which may be valid in well-structured economies) could bring about positive results in African economies that are characterized by weak and disarticulate structures" (UNECA, 1989a). Evaluation reports however, show that in many African countries with orthodox SAPS, sustained economic growth has not materialized (Azon and Adjounhonoun, 1990; Basse, 1990; Chander, 1990; Isamah, 1990; Tungaraza, 1990; and Twumasi, 1990). Rather the rate of investment has tended to decrease; budget and balance of payments deficits have tended to widen after some temporary relief; and, debt service obligations have become unbearable. In effect, the application of orthodox SAPs have partially contributed to significantly exercerbate the economic crisis and have made recovery more difficult by undermining the social and political cohesion of African countries; the declining of per capita income and real wages; the rising of poverty levels and income inequalities; and, the contraction in and deterioration of the social sectors particularly employment, education and health.

6. Against this background, the long- and short- term measures of the Lagos Plan of Action (LPA), formulated in 1980, was designed to alleviate mass poverty and improve the living standards of Africans. Since 1983, when available social indicators started to show negative consequences of SAPs in many developing countries, UNICEF has been in the fore front in advocating "adjustment with a human face" (UNICEF 1990a). Such adjustments include the need for measures to protect the poor and vulnerable groups; investment to help small scale farmers, traders, women producers; and investment in education , health and employment creation activities to alleviate the unemployment situation.

7. In 1984, at the Second African Population Conference, the Kilimanjaro Programme of Action on Population (KPA) was adopted. This indicated that population should be a central component in the formulation and implementation of policies and programmes for socio-economic development plans. Alongside with the KPA, both Africa's Priority Programme of Action for Economic Recovery, (APPER) 1986-1990 and the United Nations Programme of Action for African Economic Recovery and Development (UN-PAAERD), 1986-1990 were intended to lay foundation for alleviating the effects of the economic crisis. These could not neutralize the pressure from external factors that have insisted on acceptance of SAPs in order to get external assistance.

8. Indeed government expenditures as a share of the Gross Domestic Product (GDP) continued to decline almost everywhere in indebted developing countries in the 1980s. Forced with the need to reduce these expenditures, governments concentrated cuts more heavily on public investment on the provision of health care, education, housing, safe water supply, sanitation, employment these affected the well-being of the populations involved. Together with other elements of the SAPs, living standards of households were affected in different ways and intensity.

9. A critical observation regarding these various development oriented frameworks (ie. LPA, APPER and UN-PAAERD) is that each of them was designed to address a particular issue; none of these issues was considered alongside with population - the ultimate beneficiary of development goals. Little wonder then, available evidence from various studies have shown that implementation of the conventional SAPs has not brought about the desired results in reducing the adverse consequences of the economic crisis on the African people.

10. In order to forestall this shortcoming and as the gravity of the economic situation in African countries continued unabated, the third meeting of the United Nations Steering Committee on follow-up on the UN-PAAERD decided on the convening of a major international conference in

Africa on the human dimension of Africa's Economic Recovery and Development which took place in Khartoum, Sudan, 5-8 March 1988 (UNECA, 1988). The Khartoum meeting noted the severity of SAPs on millions of people in many African countries implementing them since such programmes are incomplete, mechanistic and have a shortime perspective during which the various problems cannot be resolved. The thrust of the Khartoum Conference was to place the social dimension at the centre of SAPs and to stress that the latter should complement government efforts to attain long-term socio-economic development goals.

11. The recognition by the IMF and the World Bank of the adverse problems of SAPs is reflected in the initiation in 1987 by the African Development Bank, UNDP and the World Bank of the Social Dimension of Adjustment (SDA) programmes to address the difficulties occasioned by SAPs. Whereas SAPs have different effects on different population groups within the society, SDA aims at identifying the type and extent of effects on the various groups (the poorest groups) with an objective of protecting them and integrating these groups into the main economic stream (ADB; UNDP; World Bank, 1990). For example in Cameroon, SDA programmes are supporting health care, family planning, education, employment, women in development and community development programmes.

12. A substantial emphasis of SDA has been put on obtaining an adequate data base to assess the social impact of adjustment programmes on the vulnerable groups as well as to identify target groups for projection (United Nations, 1991). Consequently, the data in several areas of statistics have become available much sooner than would otherwise. In some cases, innovative approaches to data collection have been attempted. For instance, customs registers were changed in some countries to obtain up-to-date economic statistics relating to foreign trade as well as to help project the external debt burden. Additionally, developing countries have been requested (by international organizations) to gather additional statistics that could permit an assessment of the social consequences of the adjustment programmes.

13. Unfortunately, these developments sometimes appeared to be at the expense of permanent surveys of production, services and household surveys. This is one aspect of the negative side of SDA programmes; there are other aspects. It is suggested that SDA's "treatment of the economics of adjustment is quite conventional and its attempted innovation to link these analytically with the issue of the welfare of individuals (or households) misleads it to overstress the importance of household survey as the sole instrument for action-oriented research" (UNDP, 1990b). More fundamentally, by ignoring its predecessors 'in the area of poverty' (eg. UNDP - Human Development Report; and, UNICEF - Adjustment with a Human face), SDA has failed to capitalize on these earlier contributions in order to focus on the institutional, managerial, organizational and administrative aspects which together, constitute the prerequisites for any successful intervenist policies. Given the fragility of public administration in most African countries, this is a serious limitation. Indeed, "its lack of clear focus, its single minded adherence to one tool of empirical research as well as its total neglect of institutional issues and of delivery systems greatly curtail its value to African governments (UNDP, 1990b). Details of the merits and demerits of SDA programmes are contained in an interim evaluation report prepared for the 1990 UNDP Governing Council.

14. In the face of the limitations of SAPs and SDAs, the challenge still facing African governments is to explore ways by which new and innovative studies can be made in attaining social development goals while using poverty sensitive adjustment policies to establish a broad based and sustainable economic growth path. Operational and programmatic realities have not been

overly successful in the integration of economic and social sectors. It was out of recognition of the serious problems arising from SAPs (and subsequent SDAs) that ECA started in 1988 to develop a framework that would address those problems; the framework, known as the African Alternative Framework to Structural Adjustment Programmes (AAF- SAP), was adopted by African Ministers of Economic Planning and Development and Ministers of Finance in 1989. At the centre of AAF- SAP is the human dimension. Basically AAF-SAP comprises (a) a macro-economic framework; (a) policy directions and measures; and, (c) implementation strategies (or policy instruments). Together these components take into account the dynamic relationships among all major elements related to the ideal adjustment with transformation in African economies. It is hoped that the resulting holistic structure could eliminate the dichotomy between structural adjustment and long-term development that is peculiar to SAPs (UNECA, 1989a).

15. The main thrust of AAF-SAP is the elimination of the indicated bottlenecks from SAPs in order to provide needed 'enabling environment' that would foster sustainable developement of African countries. In this context, it is to be stressed that AAF-SAP is not a development programme to be applied in all countries. Rather, it is a framework that is designed to aid the formulation and implementation of specific country development programmes; it is particularly useful for selecting appropriate development policy instruments and measures. As a human-centred framework, it implies full democritization of all aspects of economic and social activities and calls for intensified inter-country co-operation in the designing, implementing and monitoring of national development programmes.

16. From the foregoing outline on AAF-SAP, however, no specific provision has yet been provided for population within the framework. Indeed, to date, only three policy instruments have been proposed, namely the use of multiple exchange rate system (UNECA, 1990b), differential interest rate policy (UNECA, 1990c) and agricultural production subsidies (UNECA, 1990d). The 'endogenization' of population variables in the development planning process is being suggested at this point as an additional policy instrument of AAF-SAP.

17. The main focus of this paper is to provide a framework within which this 'endogenization' process can form an integral part of AAF-SAP. In this context, it is pertinent to first assess the impact of SAPs on various population growth components in the region. The essence of such an assessment is to identify critical aspects of population growth component that could be integrated into the AAF-SAP framework while evolving national population programmes (NPPs) as integral parts of over-all national development programmes. It is hoped that by stressing such factors, the NPPs could ensure the success of population policies in redressing rapid population growth in the region. The assessment is attempted in section two. In section three, the elements of the population related remedial strategies to be incorporated into AAF-SAP are presented to ensure the achievement of sustainable development in the region.

I. IMPACT OF SAPs

18. In order to establish the impact of SAPs on population among African countries, certain population variables are selected for consideration, depending on availability of data. Two periods are considered : the preadjustment period, from say 1965 to 1980, when most African countries did not take part in the implementation of SAPs, and the period since 1980, when almost all African countries were implementing; this therefore is the post adjustment programme period. The two periods are strictly not comparable even in terms of duration. The initiation of SAPs (ie. the starting year) and duration (in terms of intensify) also differ from one country to another (See Table

l). In particular, the pre-SAP period comprises an earlier boom era (1965-75) for most African countries and the onset of economic decline (from 1975 on wards). Additionally, the relationship between SAPs and population related variables is more implicit than explicit; this tends to constrain adequate appreciation of the resulting analysis. There is also the problem of ascertaining the extent (if any) to which the country has actually operationalized the implementation of the adjustment programme following putting in place, either "structural adjustment arrangements" or "stand-by arrangements" or "World Bank Structural Adjustment Loans" (See Table l). Accordingly, the data examined here are exploratory at this stage. With time, when more firm data become available, the impact of SAPs in this context would be ascertained with greater confidence.

19. Average annual growth rate (%) in per capita GNP (AGNPC=X_1) is used as a proxy for an index of a nation's economic performance. To the extent that SAPs have several objectives (eg.alleviation of balance of payments problems, effecting economic stability, ensuring long term growth and development, etc.), the use of one index to measure the various impacts of these objectives is more for convenience than is analytically desirable. About six population variables related to AGNPC are selected. These are (a) average annual reduction rate in the under 5 mortality rate (U5MRAARR=X_2). This measures the end result of the development process and has been chosen by UNICEF as its single most important indicator of the state of a nation's children (UNICEF, 1990). When used in relation to AGNPC, this index gives a picture of the progress being made by a country towards the satisfaction of the most essential of human needs; (b) average annual rate of reduction in the total fertility rate (TFRAARR=X_3). This is used as a proxy for average family size (i.e., average number of children ever born); (c) average annual growth rate (per cent) of the urban population (UPOPAAGR=X_4). This is used in place of the more approriate level of urbanization which is normally better associated with modernization; (d) daily per capita calorie supply as per cent of requirements (DPCCALS=X_5); (e) average index of food production per capita (PCAIFPROD=X_6); and, (f) per cent of age group enrolled in primary school (PRIENROL=X_7).

20. In Table 2, data on all seven variables as compiled by UNICEF in its '1990 state of the children report' are presented for 36 African Countries reported by the ECA Secretriat (l989b) as having SAPs. Of these, only 28 countries have data in respect of all the seven variables. In the UNICEF study under reference, a justification was provided for the inclusion of all the variables in its study. However, there is need for caution in using the selected seven variables here in assessing the impact of SAPs on population in the African region. For one thing, these are secondary data given a different study orientation. Additionally, and as noted in the UNICEF study, much of the data are official government estimates received by the responsible United Nations agency; where no such reliable figures could be obtained, available estimates made by the responsible United Nations agency have been used. For instance, most of the under-5 mortality estimates are interpolations based on 5-year estimates prepared by United Nations Population Division (New York). The annual per capita gross national product are annual average growth rates computed by fitting trend lines to the logarithmic values of GNP per capita at constant market prices for each year of the time period.

2l. Analytically, each of these seven sets of data is considered in turn at the two time periods in the pre-SAP (t_1) and post-SAP (t_2) periods using the non-parametric Wilcoxon matched-pairs signed Ranks Test. This provides a useful technique for making judgement of 'greater than' between any pair's two performances. The results of necessary computations for the 28 countries with complete data are summarized in Table 3. From first principles, the null hypothesis in each of the seven cases is that there is no difference between the estimates for the pre- and post-SAP

periods. Against this, is the alternative research hypothesis which varies for each of the seven variables. As indicated in Table 3, the null hypothesis is rejected if the difference between the post- and pre-SAPs values (ie. P) is statistically different at the significance level of .05 (α = .05); it is accepted otherwise.

A. Economic performance and SAPs

22. Conceptually, with X_1 an increase (in the index) over the two time periods should indicate some improvement in the general economic performance of a country. In other words, the values in Column 4 (Table 2) should be largely positive. The data show an overall negative economic performance for virtually all the countries. Subject to the limitations of the index (as noted in para 19), this finding tends to suggest the negative impact of SAPs on African economies. The Wilcoxon test testifies to these results. The null hypothesis is rejected in favour of the alternative that post-SAPs estimates of average annual per capita GNP for 28 of the 36 African countries with SAPs are lower (in absolute value) than those for the pre-SAPs period (Table 3).
Excepting Mauritius, Senegal and Egypt, the direction of change (between the post versus pre SAPs periods) in the values of annual per capita GNP is negative for all the other 25 countries (with data) that have adopted SAPs.

23. Given this finding, it is important to stress the need for care in assessing the role of SAPs in this context. For instance, in the pre-SAPs period (1965 - 80) most African countries were less effected by the external shocks noted in Para 1 (eg. the oil price increases and the collapse in the commodity prices of African exports). Of course , the conventional measure of a country's level and pace of development is per capita GNP and its annual growth rate. However, although useful for many purposes, the limitations of per capita GNP as a development indicator have long been acknowledged (UNICEF, 1989). Obviously, SAPs' objectives did not explicitly include the raising of per capita GNP. But, as an instrument for alleviating the effects of the economic crisis in the region, the logical expectation is that (implicity) post SAPs estimates of per capita GNP should exceed their pre SAPs levels. The fact that this is not the case for the data examined here is in a way supportive of the evidence from several evaluation studies (noted earlier) to date of the negative impact of SAPs on the economic performance of most African countries.

B. Child Mortality and SAPs

24. Regarding child mortality, the explicit expectation is that if SAPs were to have the desired effects of structurally transforming the African economies (UNECA, 1989a: p.2), then infant and child mortality should be considerably reduced in the post-SAPs period (ie. the average annual rate of reduction in child mortality estimates should increase over the SAPs time interval). This implies that the estimated values of average annual reduction rate in under 5 mortality in the post-SAPs period should exceed those in the pre-SAPs period. From the results, this expectation is not realized and the null hypothesis is also rejected (see Table 3). The estimated values of average annual reduction rate in under 5 mortality (column 7 of Table 2) are either very low (less than 1%) or negative. In other words, SAPs did not generally result in effecting reductions in the mortality of the under-5 children. The cases of Sierra Leone (change = 1.0%), Zaire (change = 1.1%) and Senegal (change = 3.0%) are the three main situations where the expected excess of post over pre-SAPs values are fairly significant. Possibly, these enhanced reductions are sequels of other programmes and development-oriented frameworks like the world population plan of action (WPPA) as well as the one deriving from the Alma-Ata Declaration on primary health care and Health for All by the year 2000; the LPA; and, the KPA.

25. Taken together, the general indication is that SAPs were not causal to the desired average annual reduction rate in under-5 mortality. To the extent that this variable measures the end result of the development process, then the negative impact of SAPs on African economies (see paras 22 and 23) have far reaching consequences on the future of the region namely the limited survival chances of the under-5 population in future generations in African countries.

26. As in the case of average annual per capita GNP, reduction in infant/child mortality is an indirect expectation of SAPs as an instrument of development; the explicit objective of SAPs was not necessarily to effect such reductions. In this regard, in its 1984 issue of 'The State of the World's Children', UNICEF had noted that a very real deterioration was taking place in the lives of children around the world consequent upon world recession and economic set-backs (UNICEF, 1984). The report then called on countries to take immediate action so as to prevent further deterioration. Two broad opposing forces have been at work since then, namely: (a) a dramatic acceleration in certain child survival and development actions in many countries (eg. immunization and rehydrations therapy as part of the broad move to strengthen primary health care including clean water supplies, education and other basic services); and (b) the continuation of the downward economic pressures on living standards especially in Latin America and Africa. In the latter, these pressures became extreme in the face of several years of drought (see UNICEF: 1982, 1983 and 1984). As UNICEF puts it: "adjustment with a human face would strengthen and help sustain child survival and development measures simultaneous with enhancing their effectiveness by increasing basic living standards especially for those with low incomes" (UNICEF, 1984).

27. Recently, "The Children Summit" has noted that for the infant mortality rate to be reduced to 50 (or below) per 1000 live births in every country, the plan of action calls for measures to provide universal access to safe drinking water, adequate sanitation, reduction of illiteracy, elimination of such diseases as polio, tetanus, measles, etc. (World Development Forum, 1991). This aspect of 'adjustment with a human face' would not be realized if SAPs continue to discriminate against children. As is well known, SAPs measures to cut spending on health services in combination with declining real wages and rising prices of food is associated with a rise in mortality.

28. Additionally, while the World Bank has been insisting on the need to reduce population growth rates in the developing countries as one of the means to accelerate economic growth rate, the same institution prescribes cuts in health programmes that are expected to provide family planning services. African countries have eventually accepted the need for family planning programmes but they need the means to do so - education, health and information. Under conditions of increasing mortality and lack of means for family planning, reduction in population growth rates cannot be attained. There is need to have health services expanded in order to reduce the high infant, child and maternal mortality rates and provide adequate family planning services.

C. Average family size and SAPs

29. The same expectation is applicable to average annual rate of reduction in total fertility rate (the proxy for average family size). The desired effect of SAPs should be to induce a small family size norm as the ultimate goal of development (i.e values in column 10 of Table 2 should be largely positive). However, from Table 2, about 60 per cent of the 28 member States with data recorded zero average annual reduction rate in their average family size during the post-SAPs period (ie. 1980-87). In virtually all these cases, the pre-SAPs (ie. 1960-80) average annual reductions in average family size were largely negative. Therefore the resulting changes (ie. post-less pre-SAPs

values in column 10 of Table 2) have to be carefully interpreted because on the bases of these changes, Table 3 result implies that orthodox SAPs have had the desired effects in reducing average family size in African countries. This in fact is not the case. Besides, it is to be noted that for contemporary developing nations, the relationship between improved standard of living and family size is not quite clear. In some of the countries, oil revenues have recently implied sudden gains in per capita GNP whereas declines in family sizes have a built-in time lag effect.

30. For instance, recent, ECA estimates indicate that "Africa's seven major oil exporters earned $10.5 billion more in 1990 (of which $5.2 billion went to Nigeria) due to the oil price increase alone, not counting earnings from increased production. This helped push the economic growth rate of these countries to an average of 3.5 per cent (Africa Hall News, 18 January 1991). It can be argued that in the few cases with apparent greater reduction rate in average family size in the post-relative to the pre-SAPs period (eg. Burundi, Mauritius, Morocco, Nigeria, Rwanda, Sudan, Tunisia and Zimbabwe), the explanation is not necessarily an aftermath of SAPs. It is possible that such other factors as integrated maternal and child health with family planning programmes have contributed to the apparent reduction in the family size of these few African countries.

31. Perhaps what is important here is not the failure of SAPs to effect desired reductions in average family size but, orthodox SAPs appear to have drawn attention away from such critical areas of African social situation as the family (Adedeji, 1990). It is suggested that there is a strong correlation between adverse economic situation and family problems (e.g. insecurity). Families that are continually faced with primary poverty are known to be prone to internal domestic conflicts; these tend to impair their ability to perform adult stabilization and child development functions with adverse ramifications for the entire society.

32. In the light of the severe retrogression in other social sectors and on which the family welfare directly depends, the trauma in African families, occasioned by inability of parents to meet basic needs of children, is evidenced in rising incidences of juvenile delinquency, teenage prostitution, drug abuse, alcoholism, armed robbery as well as crimes against private and public property. Additionally, by decreasing the purchasing power of families, housewives in most African countries have had to take up rather 'mean jobs' to supplement the family income with the attendant 'unhealthy exposure' of these women, thus further excerbating the incidence of family in-stability. In terms of sustainable development, these symptoms are unhealthy and should be addressed within alternative frameworks to SAPs.

D. Rural-urban migration flows and SAPs

33. With the average annual growth rate in the urban population, sustainable development should have the effect of reducing the need to migrate from rural to urban areas in search of survival. If SAPs ensured such a development pattern, then by implication, the values in column 13 (Table 2) should be largely negative. This is the case in about 60 per cent of the 28 countries with data. The outcome in Table 3 however, suggests that average annual growth rates of the urban population in the pre- and post-SAPs period were largely the same (since the null hyphothesis is accepted). In this regard, it should be stressed that of the two factors that largely account for urban population growth (ie. natural increase and net migration), available evidence suggests that net migration is the more dominant factor in the African region. Preliminary analysis of the 1990 census of Zambia, for instance, suggests that the urban population growth rate in 1990 was lower than that of 1980 holding constant the natural increase (CSO: Lusaka, 1990). Since Zambia was implementing SAPs during the 1980-90 decade (with a short break between 1987 to mid 1990), this

result could suggest that possibly, in the wake of SAPs, urban living conditions were less conducive than those in the rural areas thereby accentuating the urban-rural exodus. This Zambian example is not an isolated case but probably reflects the trend in most of the 36 African countries that have been implementing SAPs.

34. For instance, besides Zambia, results of the analysis from the censuses of Tanzania (Bureau of Statistics: Dar-es-Salaam, 1990) indicate lower estimates of annual average intercensal growth rate during the 1978-88 relative to the 1967-78 intercensal periods for the largely urbanized regions (eg. Dodoma, Kilimanjaro, Dar-es-Salaam, etc.). Similarly, available estimates of annual rates of growth (%) for the 1970 - 80 period are reported as lower than those for the 1960 - 70 period in 14 African cities[1] (Makannah, T. J., 1990). If the thesis of a systematic worsening of living conditions in the urban areas of African countries consequent upon SAPs is tenable, then there is a strong case for effective integrated rural development programmes in these economies (Makannah, 1990; Annie, 1985; Findley: 1977, 1981 and 1982).

35. In this regard, one of the indices of unfavourable urban living conditions in the face of SAPs is the unemployment phenomenon. This is estimated to have reached the 20-30 per cent mark at the end of the 1980s and is evidenced by widespread proliferation of micro-enterprises in the informal sector which absorbs almost 60 per cent of the urban labour force. As SAPs forced African governments to reduce the size of public sector employment, empirical evidence (JASPA, 1988, 1989) suggests that unemployment rate among educated youths (including university graduates) is rising rapidly. It is to be stressed that this type of unemployment has serious social and political ramifications because of the tremendously high cost and expectation of the training, as well as the centrality of human resources in the African efforts at recovery, growth and long term structural transformation and development.

36. However, since the evidence from the Zambian, Tanzanian and other case findings may not be quite conclusive, it can also be argued that SAPs have not operated to precipitate either the exodus from urban to rural or rural to urban areas. For instance, although no hard data are available, there is evidence of massive out-migration of high-level trained manpower from several African countries to the "oil-rich" areas (e.g. Gulf States) in recent years. Such streams of out-migration (brain drain) are also largely the effects of SAPs. It is therefore suggested that the observed trend (Table 2) may reflect the incidence of the noted brain drain rather than the effect of rural-urban or urban-rural migration flows.

E. Nutritional deficiency/food production and SAPs

37. With daily per capita calorie supply and average index of food production, the desired expectation with sustainable development is a positive trend. Effective structural transformation programmes should ensure 100 per cent requirement both in the per capita calorie supply and food production. This implies that the values in columns 16 and 19 (Table 2) should be largely positive. In the case of daily per capita calorie supply (as % of requirements), the results in Table 3 show that the pre-and post-SAPs estimates were essentially the same (since the null hypothesis is accepted). Possibly, due to cuts (caused by SAPs) in the provision of social services including

---

[1] These include Abidjan, Accra, Addis-Ababa, Banjul, Dakar, Dar es-Salaam, Freetown, Harare, Kampala, Kinshasa, Lagos, Lusaka, Nairobi and Yaounde.

subsidies on the incomes of farmers, the prices of essential basic food items have soared to a point that families in most African countries cannot afford to purchase the basic food items.

38. And yet, adequate supply of food is essential for child development and growth. Its lack leads to malnutrition which affects most children, pregnant women and lactating mothers. Malnutrition in children is associated with higher risks of mortality. Food price increases resulting from SAPs and measures like devaluation and removal of subsidies generally increase the incidence of malnutrition. Indeed the cumulative effects of nutritional deficiency in African countries are widespread and have resulted in unprecedented malnutrition among children. Available evidence indicates that by the end of the 1980s, almost 40 percent of pre-school children in Subsaharan Africa suffered from acute protein deficiency (Adedeji, 1990). Such severe malnutrition in early childhood affects later labour productivity in adulthood with the potential of jeopardazing the growth of African economies.

39. Regarding per capita annual index in food production, the results in Table 3 suggest that post-SAPs food production in African countries have exceeded the pre-SAPs situation (since the null hypothesis is rejected). This was expected because in the face of high prices particularly for non-farm food items, the population in most African countries resorted to small-scale farming in order to sustain life. The achievement of self sufficiency in the production of basic staple food items particularly in the rural areas of most of these countries is perhaps one of the positive aftermaths of SAPs in African countries. But this does not necessarily ensure a balanced diet for these rural populations. It is in this connection that one of the recommendations from the Khartoum Declaration becomes pertinent namely that (at the national level) even in times of severe resource constraints, attempts should be made by African countries to ensure acceptable minimum levels of, and access to food and social services particularly for the vulnerable groups (UNECA, 1988).

F. Education and SAPs

40. With education the desired expectation is a positive trend in primary level school enrolment. This goal is not realized from the results in Table 3 since the null hypothesis is rejected. From Table 2, about 43 per cent of the 28 countries with data experienced considerable reductions in primary school enrolment in the post-SAPs period. This is at variance with the fact that sustainable development and the policy of promoting education are mutually reinforcing.

41. And yet the World Bank recommends the introduction of fees for education and hospital services. World Bank sponsored study in Malawi, showed that an increase in primary school fees reduced primary school enrolment by as much as 26 per cent. (Mohammed, 1990). By implication, this particular policy reform would, upon implementation, "alienate the vast majority of people on the poverty line from the benefits of these services; strengthen traditional tendencies; and, reduce the scope for effective grassroot participation in the development process". From the point of view of long term development, the reduction in public expenditure in education necessitated by SAPs has meant a reversal of the process of heavy investment in human resource development initiated in the early 1960s to forge structural transformation in African economies (Mohammed, 1990).

42. In effect, the idea of education for all has been brought to a halt in many African countries because of the debt crisis and government cuts in spending. In the past few years, there has been unprecedented halt in the growth of basic educational services, stagnation and deterioration of educational quality. Educational facilities and materials leave much to be desired in many African

countries. School buildings are crumbling, educational materials such as books, stationery and equipment are either non-existent or inadequate. In some cases, the shift system has been introduced in order to accommodate the high numbers of students who need education. Additionally, the pupil teacher ratios are very high with the result that there is no adequate personal attention to ensure effective teaching.

43. Thus the consequences of implementing SAPs in their conventional form are associated with larger numbers of illiterates. This in turn is associated with larger numbers of the population without gainful employment. Without employment, the population would not have access to other basic needs all of which need to be paid for (eg, health services, food, shelter, transportation, water and sanitation services, clothing etc). In effect, education has strong relationship with all other socio-economic sectors, and is necessary for socio-economic and sustained development. Technological innovations depend on the education of the people; better and improved health is related to education. The same is true with child survival, improvements in agriculture, and employment opportunities.

II. ENDOGENIZING POPULATION FACTORS WITHIN AAF-SAP

44. Thus far in this analysis, some preliminary data have been examined on the possible effects of SAPs and selected population related corrolates principally to identify relevant factors that could be used to enhance the effectiveness of population policy measures. The analysis reveals that in most African countries where SAPs have been implemented, the social costs have been enormous. Food subsidies had to be discontinued simultaneously with cutting expenditures on health, education and other social services, ostensibly in order to balance budgets and release resources for servicing debts. In some cases, riots are reported to have resulted from the SAPs squeeze (Chanda, 1990; Isamah, 1990).

45. Among the six population related corrolates of SAPs examined, four have been identified as requiring particular emphasis in population policy formulation. These include (a) mortality of under-5 children; (b) family cohesion; (c) malnutrition of children; and, (iv) education of children. Contemporary generations of under-5 children will constitute the core of the future labour force in African countries. Therefore inadequate health, feeding and educational provisions for these children today would certainly produce an 'ill-prepared' labour force for future African populations. Equally, the gradual destruction of the family unit could produce seeds for the complete erosion of law and order as well as destroy a potent cohesive force in the development process of these countries.

46. Future national population programmes of African countries should therefore make special provisions to accommodate these four amd other related concerns as an integral part of overall national development strategies. This point is important because given the economic crisis, many African children are "growing in circumstances under which: (a) they may never fulfil the mental and physical potential with which they were born; (b) they will not be able to derive maximum benefit from the educational opportunities available; and, (c) their abilities to work productively and be rewarded accordingly might be restricted." These traits imply that "the children might be less likely to protect the health and normal growth of generations yet unborn." Breaking this self-perpetuating cycle should be central to the African development process (UNICEF, 1989: pp.60-61).

47. It will be recalled that although some African countries have formulated and implemented national population policies for almost three decades, these have been largely ineffective in terms

of curbing rapid population growth rates. Among the causes of failure is an inadequate understanding of the socio-economic miliue (within which development programmes are couched) namely the family. In essence, this means a lack of understanding of the role of women within the family and the larger framework of society (UNECA, 1989c).[2] As just noted, one area requiring emphasis in future African population policy formulation and implementation is to ensure family cohesion through fostering an understanding and improving the status and role of women in the development process.

48. Recently traditional policy measures for mitigating these problem areas in African countries have largely derived from the 84 KPA recommendations addressed to African countries in nine main areas[3] and largely funded by UNFPA. At this time when the AAF-SAP framework has been developed to assist African countries to effect structural transformation of their economies, there is need to ensure that the population policy measures incorporate as an integral part of AAF-SAP, the factors identified in this analysis. To the extent that these factors derive from an analysis associated with the regional economic crisis, they are dynamic and responsive to the socio-economic realities of the region. The list of these factors could be increased when additional data sets are analysed. In order to indicate how the four areas of emphasis can be integrated into the overall development strategy, the process of endogenizing population factors in the latter is first presented.

49. An outline and current policy instruments of AAF-SAP were presented in Section I. Additionally, it was (i) noted that no specific provision has yet been provided for the role of population within the framework; and, (ii) the endogenization of population variables in the development planning process should constitute an additional policy instrument of AAF-SAP to ensure that it provides a holistic and fully integrated framework to population development planning process in the African region. The said endogenization process has been presented in two earlier ECA documents (UNECA: 1988, 1990). The highlights are reiterated here for emphasis.

50. In operational terms, the said 'endogenization' process implies simultaneous formulation and implementation of national development and population programmes. When both programmes are so implemented, their effects can be mutually beneficial. The long-term goal of development programmes is to minimize and/or eliminate the incidence of poverty, unemployment and income inequality; this takes time to materialize. On the one hand, a national population programme is aimed, among other goals, at fostering a small family size norm. With most African countries having large family sizes currently, a national population programme can minimize the chances of rapid population growth frustrating development efforts in the short run before the long-term goals of development programmes are realized. On the other hand, when this development goal is

---

[2] For a fuller discussion of these factors see "The status and prospects of population policies in ECA member States", African Population Series, No. 10 (UNECA, 1989, pp. 42-82.

[3] The nine main areas within which the 84 KPA recommendations can be subsumed are population and development; fertility and family planning; mortality and morbidity; urbanization and migration; changing role of women in the development process; children and youth; community development; population information; and data collection, training and research.

attained, a small family size necessarily becomes an implicit norm. It is in this sense that the simultaneous implementation of both programmes can yield mutually reinforcing benefits.

51. In order to foster the endogenization of population factors in the development process, four sets of activities are pertinent. The first is to determine the conceptual framework. This involves a study of the interrelationships between population and development-related data (pertaining to the base year of a development plan period) using an appropriate socio-economic demographic model. The interrelationships so derived should be carefully analysed in terms of their implications for the national development planning.

52. Such implications should constitute the basis for deriving the demographic objectives to be attained in the course of implementing the development plan. In determining these objectives, the factors derived here (e.g. effecting reductions in under-5 mortality, fostering family cohesion, etc.) should be borne in mind. Policies and programmes should then be formulated in pursuance of these objectives. This activity should be undertaken for each sector. For consistency, each sector should be provided with appropriate guidelines to enable it establish the said interrelationships and objectives together with the associated policies and programmes. The set of policies, programmes and projects so derived should then be 'put together' and prioritized consistent with the overall government priorities (for the plan period) and available resources. This is the 'heart' of the endogenization process and is the missing link in past and contemporary efforts at integrating population factors in the development plans of African countries.

53. By ensuring that the demographic objectives of the developement plans derive from research findings using pertinent population and development-related data of the country as well as relevant socio-economic demographic models, the endogenization of population factors in the planning process would have been enhanced. The non-compliance with this desideratum is tantamount to 'exogenous' treatment of the population factor in the planning process... the bane of failure in past and contemporary attempts by African countries at integrating population factors in the development planning process.

54. The activities involved in determining the conceptual framework for the endogenization process are enormous and necessarily raise the question of who does what? The issue of institutional arrangements thus constitutes the second activity in the process. In the "Guidelines" prepared earlier by the ECA secretariat for integrating population factors in the development plans of its member States (UNECA, 1988), two sets of institutions have been proposed. To enhance the formulation of a national population programme, it is suggested that a National Population Commission (NPC), a Population Planning Unit (PPU) and a Data/Policy Unit (DPU) should be established. The division of labour between these units relative to the various responsibilities involved in the first activity (just outlined) is spelt out in the "Guidelines".

55. Thereafter a Multisectoral Committee (MSC) should be constituted to oversee the implementation aspects of the national population programme so formulated. This committee should then constitute a task force for each of the population policy measures. The responsibility of each task force in this regard would be to overview the problems per policy measure using existing prior knowledge in the country. The aim of the review should be to come up with suggested solutions, an action agenda and a budget for implementing each policy measure. Together (i.e., for policy measures), these reviews should constitute a background paper for an "Action Workshop" for implementing the resulting national population programme.

56. The third set of activities relates to the issue of needed training. The question at this point is whether the country has in place trained and available personnel to perform the various activities noted under the first activity as well as fill the positions noted under the second activity. Again in the said "Guidelines", it has been suggested that a training programme should be developed at the formal and middle-level and political cadres to provide the needed skills (where gaps exist).

57. Finally, the dissemination of information generated by the whole endogenization process is the fourth activity. Information is needed on availability and accessibility of existing data in the area of population and development planning in the country; the modalities for such dissemination are crucial to the success of the integration process. A regional project (POPIN-AFRICA) was instituted in 1984 to promote such dissemination amongst policy-makers, planners, researchers, etc.

58. Given these activities, a national development programme based on the AAF-SAP framework should (i) address the issue of minimizing and/or eliminating the incidence of poverty, unemployment and income inequality simultaneous with focusing on such social issues as health, education, malnutrition and family cohesion; (ii) incorporate the endogenization process (as just outlined); and, (iii) ensure that the demographic objectives of the national population programme are dynamic in nature and related to the socio-economic realities of the country. This means that it should include such factors as derived in this study (e.g. effecting declines in under-5 mortality and average family size).

III. CONCLUSION

59. This paper has examined the apparent effects of structural adjustment programmes on selected population related corrolates in African countries. Although the secondary data examined are exploratory, the assessment has revealed that the determination of the impact of SAPs on the various population aspects is difficult principally because the relationship between the two is more implicit than explicit.

60. Subject to the limitations of average annual growth rate in per capita GNP, the assessment notes that as an instrument intended to alleviate the effects of the current economic crisis in the region, post-SAPs estimates did not (as would normally be expected) exceed their pre-SAPs levels; hence SAPs have had a negative impact on the economic performance of African countries that implemented them. Regarding under-5 mortality and average family size, the general indication is that although other factors also influence both variables, SAPs were not causal to the desired average annual reduction rates. In the case of rural-urban migration flows, the assessment suggests that unfavourable urban living conditions in the face of SAPs (and other factors) have tended to encourage urban-rural migration flows, thus strengthening the case for effective integrated rural development programmes. On food production, generally SAPs have resulted in increased incidence of malnutrition particularly for the growing children. With education, the main effect of SAPs is to initiate a trend towards lowering of standards.

61. The assessment then identified some factors that deserve emphasis in future considerations of population policy measures as an integral part of the overall development strategy in African countries. Among these factors are under-5 mortality, family cohesion, malnutrition and education. It is stressed that utilizing factors so derived will focus population policy measures in the region on the current economic crisis.

62. The paper then outlined the main highlights of a framework (AAF-SAP) developed by ECA to ensure that SAPs become effective and notes that for the said framework to fully realize its potentialities, development programmes (based on it) should take account of such population factors (as just noted) in the process. It is suggested that the endogenization of population factors in the development process should constitute an additional policy instrument of AAF-SAP. The paper then provides an outline of the said endogenization process.

Table 1. Classification of ECA member States by year

No	Countries	Year of adopting SAPs: SBA	SAA
1.	Burundi	1965	1986
2.	Chad	-	1987
3.	Central African Republic	1980	1987
4.	Congo	1977	-
5.	Cote d'Ivoire	1984	-
6.	Egypt	1962	-
7.	Equatorial Guinea	1980	1988
8.	Gabon	1978	-
9.	Gambia	1977	1986
10.	Ghana	1966	-
11.	Guinea	1982	1987
12.	Guinea-Bissau	-	1987
13.	Kenya	1978	1988
14.	Liberia	1963	-
15.	Madagascar	1977	1987
16.	Malawi	1979	-
17.	Mali	1964	1988
18.	Mauritania	1977	1986
19.	Mauritius	1978	-
20.	Morocco	1982	-
21.	Mozambique	-	1987
22.	Niger	1983	1986
23.	Nigeria	1986	-
24.	Rwanda	1966	-
25.	Sao Tome and Principe		-
26.	Senegal	1979	1986
27.	Sierra Leone	1966	1986
28.	Somalia	1964	1987
29.	Sudan	1966	-
30.	Tanzania	1975	1987
31.	Togo	1979	1988
32.	Tunisia	1964	-
33.	Uganda	1971	1987
34.	Zaire	1967	1987
35.	Zambia	1973	-
36.	Zimbabwe	1981	-

Note: EFF = Extended Fund Facility
ESAA = Enhanced Structural Adjustment Arrang
EXTA = Extended Arrangements
SAA = Structural Adjustment Arrangements
SBA = Stand-by Arrangements
SAL = World Bank Structural Adjustment Loans
the special Facility for Africa and special joint fi

Source: UNECA, Statistics and policies:
Report "Africa's Adjustment and

adopting IMF and World Bank supported SAPs

SAL	EXTA	ESAA	EFF
1986	-	-	-
-	-	-	-
1985	-	-	-
-	-	-	-
1981	-	-	-
-	-	-	-
1986	-	-	-
-	-	-	1980
1986	-	1988	-
1986	1987	1988	-
1986	-	-	-
1985	-	-	-
1980	-	-	1975
-	-	-	-
-	-	-	-
1981	1983	1988	1983
1987	-	-	-
1985	-	-	-
1981	-	-	-
-	-	-	1980
-	-	-	-
1986	-	1988	-
-	-	-	-
-	-	-	-
-	1986	-	- -
1980	-	1988	1980
-	-	-	1981
-	-	-	-
-	-	-	1979
-	-	-	-
1983	-	-	-
-	1988	-	-
-	-	-	-
1987	-	-	1981
-	-	-	1981
-	-	-	-

nents

hich include IBRD or IDA loans for adjustment,
ncing; but excludes sectoral adjustment loans).

CA preliminary observation on the World Bank
rowth in the 1980s", (UNECA, 1989).

Table 2. Population related corrolates of Structural

No.	ECA member State	AGNPC (%) 1965-80	AGNPC (%) 1980-87	AGNPC (%) Change	U5MRAARR 1960-80	U5MRAARR 1980-87	U5MRAARR Change	TFRAARR 1960-80	TFRAARR 1980-
	1	2	3	4	5	6	7	8	9
1	Burundi	2.4	-0.1	-2.5	0.9	1.7	0.8	-0.8	0.2
2	Chad	-1.9	-2.9	-1.0	1.3	1.6	0.3	0.1	0.0
3	Congo	2.7	1.7	-1.0	-	-	-	-	-
4	Cote D'Ivoire	2.8	-3.0	-5.8	2.3	2.0	-0.3	-0.1	0.0
5	C.A. Republic	0.8	-0.7	-1.5	1.2	1.1	-0.1	-0.3	0.0
6	Egypt	2.8	2.9	0.1	3.0	3.4	0.4	1.4	1.2
7	Eq. Guinee	-	-	-	-	-	-	-	-
8	Gabon	5.6	-3.5	-9.1	-	-	-	-	-
9	Ghana	-0.8	-2.0	-1.2	1.5	1.5	0.0	0.3	0.2
10	Gambia	-	-	-	-	-	-	-	-
11	Guinea	0.8	-1.4	-2.2	-	-	-	-	-
12	Guinea Bissau	-	-	-	-	-	-	-	-
13	Kenya	3.1	-0.9	-4.0	2.2	2.0	-0.2	-0.1	0.0
14	Liberia	0.5	-5.2	-5.7	2.0	2.0	0.0	-0.2	0.0
15	Madagascar	-0.4	-3.7	-3.3	2.6	2.0	-0.6	0.0	0.0
16	Malawi	3.2	0.0	-3.2	1.0	1.7	0.7	-0.1	0.0
17	Mali	2.1	0.5	-1.6	0.7	1.3	0.6	-0.2	0.0
18	Mauritania	-0.1	-1.6	-1.5	1.3	1.6	0.3	0.0	0.0
19	Mauritius	3.7	4.4	0.7	4.5	4.6	0.1	3.9	4.4
20	Morocco	2.7	0.3	-2.4	2.8	3.1	0.3	1.1	2.2
21	Mozambique	-	-8.2		-	-		-	-
22	Niger	-2.5	-4.9	-2.4	1.1	1.6	0.5	-0.1	0.0
23	Nigeria	4.2	-4.7	-8.9	2.4	1.6	-0.8	-0.2	0.2
24	Rwanda	1.6	-1.0	-2.6	0.4	1.4	1.0	-0.6	0.3
25	SaoTome & Principe	-	-		-	-		-	-
26	Senegal	-0.5	0.1	0.6	2.1	5.1	3.0	0.2	0.2
27	Sierra Leone	0.7	-2.0	-2.7	1.3	1.5	0.2	-0.2	0.0
28	Somalia	-0.1	-2.5	-2.4	0.9	1.4	0.5	0.0	0.0
29	Sudan	0.8	-4.3	-5.1	1.7	1.9	0.2	0.1	0.4
30	Tanzania	0.8	-1.7	-2.5	1.1	1.7	0.6	-0.2	0.0
31	Togo	1.7	-3.4	-5.1	2.8	1.8	-1.0	0.0	0.0
32	Tunisia	4.7	0.7	-4.0	4.1	3.9	-0.2	1.5	3.5
33	Uganda	-2.2	-2.4	-0.2	0.9	1.3	0.4	0.0	0.0
34	Zaire	-1.3	-2.5	-1.2	1.8	2.9	1.1	-0.1	0.0
35	Zambia	-1.2	-5.6	-4.4	2.2	1.7	-0.5	-0.4	0.0
36	Zimbabwe	1.7	-1.3	-3.0	1.6	1.9	0.3	0.8	1.2
	MEAN(for 28 countries)	1.0	-1.6	-2.7	1.8	2.1	0.3	0.2	0.5

N/B

AGNPC = Average annual growth rate in per capita GNP (%)
U5MRAARR = Average annual reduction rate in under five mortality rat
TFRAARR = Average annual reduction rate in total fertility rate
UPOPAAGR = Average annual growth rate in urban population
DPCCALS = Daily per capita calorie supply (as % of requirements)
CAIFPROD = Per capita annual index in food production
PR1ENROL = Primary school enrolment (as % of age group)

Source : The State of the World's Children, 1984 thru 1991 (UNICEF; Oxfo
ECA preliminary observations on the World Bank Report: "Africa

djustment Programmes (SAPs) in African countries

an-ge	UPOPAAGR 1965-80	1980-87	Chan-ge	DPCCALS 1980	1984-86	Chan-ge	CAIPROD 1978	1988	Chan ge	PRIENPOL 1979-81	1986-88	Chan-ge
0	11	12	13	14	15	16	17	18	19	20	21	22
.0	1.8	8.9	7.1	96	97	1	100	102	2	28	67	39
.1	9.2	7.4	-1.8	74	69	-5	96	105	9	35	51	16
	3.5	4.3	0.8	94	117	23	82	94	12	-	-	
.1	8.7	6.6	-2.1	112	110	-2	110	94	-16	76	79	3
.3	4.8	4.4	-0.4	94	86	-8	102	83	-19	69	66	-3
.2	2.9	3.6	0.7	117	132	15	96	120	24	76	90	14
	-	-		-	-		-	-		-	-	
	4.2	6.3	2.1		107		-	79		-	-	
.1	3.4	4.2	0.8	88	76	-12	74	108	34	69	71	2
	-	-		-	-		-	-		-	-	
	6.6	5.6	-1.0	77	77	0	87	-		16	30	14
	-	-		102	-		83	-		8	18	10
.1	9.0	8.2	-0.8	88	92	4	85	90	5	110	96	-14
.2	6.2	5.7	-0.5	114	102	-12	95	93	-2	66	35	-31
.0	5.7	6.1	0.4	109	106	-3	94	91	-3	94	94	0
.1	7.8	7.7	-0.1	94	102	8	96	83	-13	60	66	6
.2	4.9	3.9	-1.0	85	86	1	88	108	20	38	23	-15
.0	12.4	7.4	-5.0	97	92	-5	77	91	14	33	52	19
.5	4.0	1.3	-2.7	119	121	2	88	99	11	103	106	3
.1	4.2	4.3	0.1	110	118	8	81	122	41	77	71	-6
	11.8	10.0	-1.8	70	69	-1	73	82	9	-	68	
.1	6.9	7.0	0.1	92	100	8	93	98	5	23	29	6
.4	4.8	6.1	1.3	91	90	-1	91	96	5	82	64	-18
.9	6.3	7.9	1.6	88	81	-7	104	75	-29	71	67	-4
	-	-		-	-		-	-		-	-	
.0	4.1	3.6	-0.5	100	99	-1	76	103	27	48	60	12
.2	4.3	5.2	0.9	89	81	-8	81	89	8	38	58	20
.0	6.1	5.9	-0.2	100	90	-10	65	98	33	30	20	-10
.3	5.1	4.1	-1.0	101	88	-13	102	100	-2	52	49	-3
.2	8.7	11.2	2.5	83	96	13	91	86	-5	104	66	-38
.0	7.2	6.3	-0.9	95	97	2	90	87	-3	117	101	-16
.0	4.2	2.9	-1.3	116	123	7	124	90	-34	106	116	10
.0	4.1	5.2	1.1	83	95	12	86	82	-4	50	70	20
.1	7.2	4.6	-2.6	94	98	4	87	94	7	90	76	-14
.4	7.1	6.7	-0.4	93	92	-1	92	92	0	95	97	2
.4	7.5	5.5	-2.0	86	89	3	92	97	5	116	128	12
.3	6.0	5.8	-0.2	97	97	0	91	96	4	70	70	0

d University Press, 1984 thru 1991); UNECA, Statistics and Policies :
Adjustment and Growth in the 1980s" (UNECA, 1989)

Table 3. Results from Wilcoxon matched-pairs signed ranks test
(Using the variables in Table 2)

Variables	Associated T-value	Derived Z-value	Hypotheses	Derived B from Z	Outcome
X_1 = AGNPC	79 (N=28)	- 2.82	H0 : $X_1(t_1) = X_1(t_2)$ $H_1 : X_1(t_1) < X_1(t_2)$	.00240	Reject H_0 SAPs have a negative impact on X_1
X_2 = U5MR	-111.5 (N=26)	- 7.29	$H_0 : X_2(t_1) = X_2t_2)$ $H_1 : X_2(t2) < X_2(t1)$	.00003	Reject H_0 SAPs have a negative impact on X_2
X_3 = TFRAARR	53 (N=22)	2.39	$H_0 : X_3(t_1) = X_3(t_2)$ $H_1 : X_3(t_2) > X_3(t_1)$	.0084	Reject H_0 SAPs have a negative impact on X_3
X_4 = UPOPAAGR	149.5 (N=28)	-1.2183	$H_0 : X_4(t_1) = X_4(t_2)$ $H_1 : X_4(t_2) < X_4(t_1)$	.1112	Accept H_0 SAPs have a positive impact on X_4
X_5 = DPCCALS	-203.5 (N=28)	-0.0011	$H_0 : X_5(t_1) = X5(t_2)$ $H_1 : X_5(t_2) < X_5(t_1)$	.5000	Accept H_0 SAPs have a positive impact on X_5
X_6 = CAIFPROD	-157 (N-27)	-8.31	$H_0 : X_6(t_1) = X_6(t_2)$ $H_1 : X_6(t_2) > X_6(t_1)$	.00003	Reject H_0 SAPs have a negative impact on X_6
X_7 = PRIENROL	167 (N=27)	-8.55	$H_0 : X_7(t_1) = X_7(t_2)$ $H_1 : X_7(t_2) > X_7(t_1)$	.00003	Reject H_0 SAPs have a negative impact on X_7

N/B t_1 = pre-SAP period; t_2 = post-SAP period
H_0 = Null hypothesis; H_1 = Research hypothesis
Reject H_0 if $B \leq a(.05)$

Source : Derived from Table 2.

REFERENCES

Adedeji, A., 'Statement delivered at the opening of the ACARTSOD Regional workshop on the social impacts of SAPs in Africa, Tripoli (Libyan A.J.), 20-25 August 1990.

African Development Bank, United Nations Development Programme and World Bank, 'The Social dimensions of adjustment in Africa', (ADB; UNDP; World Bank, 1990).

Anrie, M., 'Rural development as means of controlling rural-urban migration in Sub-Saharan Africa with particular reference to Ghana', RIPS Seminar Paper (1985), Univ. of Ghana.

Azon, A. and
Adjanohoun, G., 'Tackling the impact of SAPs on the vulnerable Groups in Benin', Tripoli, op. cit.

Basse, P.N., 'The social impact of SAPs: the case of Cameroon', Tripoli, op. cit.

Bureau of Statistics, 1988 Population census: Preliminary Report (Dar-es-Salaam, 1990).

Central Statistical Office, 1990 Census of Population, Housing and Agriculture: Preliminary Report (Lusaka, 1990).

Chanda, D., 'The real implications of the economic Stabilization on the low-income groups in Zambia', Tripoli, op. cit.

Chanda, D. 'Political implications of SAPs in Zambia', Tripoli op.cit.

Corcia, G.A., Jolly, R.
and Steward, F. (Eds.), Adjustment with a human face (Clarendon Press: Oxford, 1987).

Findley, S., Planning for internal migration: a review of issues and policies in developing Countries (Bureau of Census, 1977).
Isamah, A., 'The social impact of SAPs in Nigeria', Tripoli, op.cit.

JASPA, ' The employment crisis and prospects in Africa: strategies and options for the future', Paper prepared for the OATUU/ILO/JASPA workshop, (Zimbabwe), 25-27 November 1988.

JASPA, African employment report, 1988 (JASPA, 1989).

Makannah, T. J., "Policy measures for stemming urban in-migration in Sub-Saharan Africa", UAPS Conference on 'The role of migration in African Development: issues and policies for the 90s' (1990).

Mohammed, D. 'Structural adjustment and the implications for social development in Africa with special reference to human resource development', Tripoli op.cit.

Nnoli, O., 'The impact of the adjustment program - on the African peasant: an overview', Tripoli, op. cit.

Sejanamane, M. M., 'From neo-colonialism to colonialism: the political implications of SAPs',Tripoli op. cit.

Siegel, S., Non-parametric statistics for the behavioural sciences (McGraw Hill: New York, 1956).

Tungaraza, F.S.K., 'The IMF/World Bank sponsored programmes and social policy in Tanzania', Tripoli, op. cit.

Twumasi, P.A., 'Impact of SAPs on health delivery systems-comparative analysis on continental basis', Tripoli, op.cit.

UNICEF, Contribution to the World Summit for Children (UNICEF, 1990a) p.14.

UNICEF, The state of the world's children, 1982 thru 1990 (UNICEF, 1982 thru 1990b).

UNDP, Human Development report 1990, (Oxford University Press: New York, 1990a).

UNDP, "The Social dimensions of adjustment (SDA) project: an Interim evaluation", Draft Report to the Governing Council (1990b).

UNECA, 'Guidelines for integrating population variables in development planning for ECA member States', Paper presented to the 5th session of the Joint Conference of African Planners, Statisticians and Demographers, Addis-Ababa (March, 1988), E/ECA/PSD.5/41.

UNECA, The Khartoum Declaration, Khartoum (Sudan), 5-8 March 1988 (UNECA, 1988).

UNECA, 'African Alternative Framework to Structural Adjustment Programmes for Socio-economic Recovery and Transformation' (1989a), E/ECA/CM.15/6/Rev.3.

Statistics and policies: ECA preliminary observation on the World Bank Report "Africa's adjustment and growth in the 1980s" (UNECA, 1989b).

UNECA, "The status and prospects of population policies in ECA member States", African Population Studies Series, No. 10 (UNECA, 1989c).

UNECA, 'Population issues for ECA members States during the 1990s', Paper presented to the 16th Session of the ECA Conference of Ministers of Economic Development and Planning, Tripoli (May, 1990a) ,E/ECA/CM.16/34.

UNECA, 'Multiple exchange rate system', Tripoli op.cit. (1990b) E/ECA/CM.16/8.

UNECA, 'Study of differential interest rate and selective credit control policy', Tripoli, op. cit. (1990c) E/ECA/CM. 16/9.

UNECA,'Production subsidy and price support policies for food self-sufficiency in Africa', Tripoli, op.cit. (1990d) E/ECA/CM.16/10.

UNECA, 'African economy improves slightly ', Africa Hall News (18 January 1991).

United Nations, "The effects of SAPs and debt burden on the work programmes of national and international statistical services", 26th Session of the Statistical Commission, 4-13 February 1991, E/CN.3/1991/4.

World Development Forum (Ed. Peggy Streit), Vol. 9, No. 1 (15 January 1991).